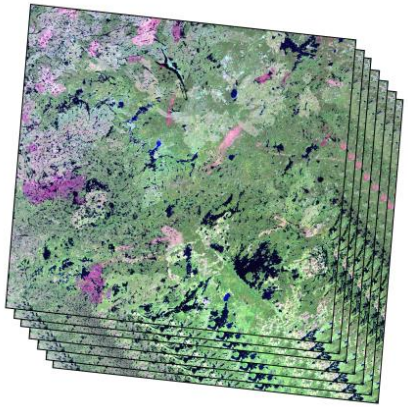
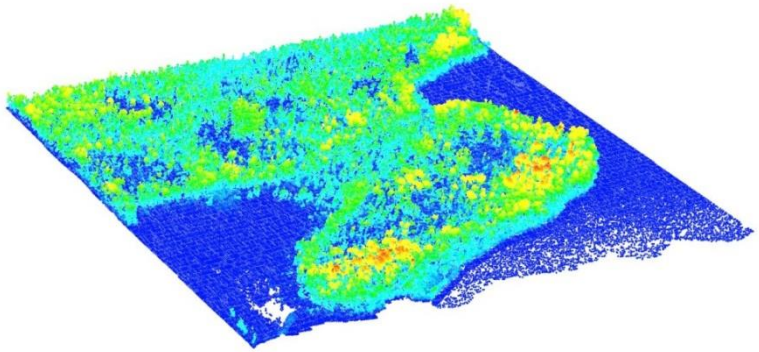
Motivation for incorporating MSS data in time-series analysis: A boreal forest example





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Study Site – Boreal Shield West Ecozone

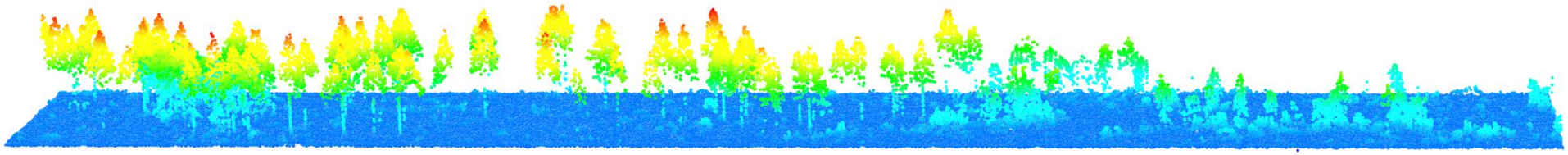
Approach

Step 1: Detect high-severity fires using Landsat time-series data (1984 – 2010)

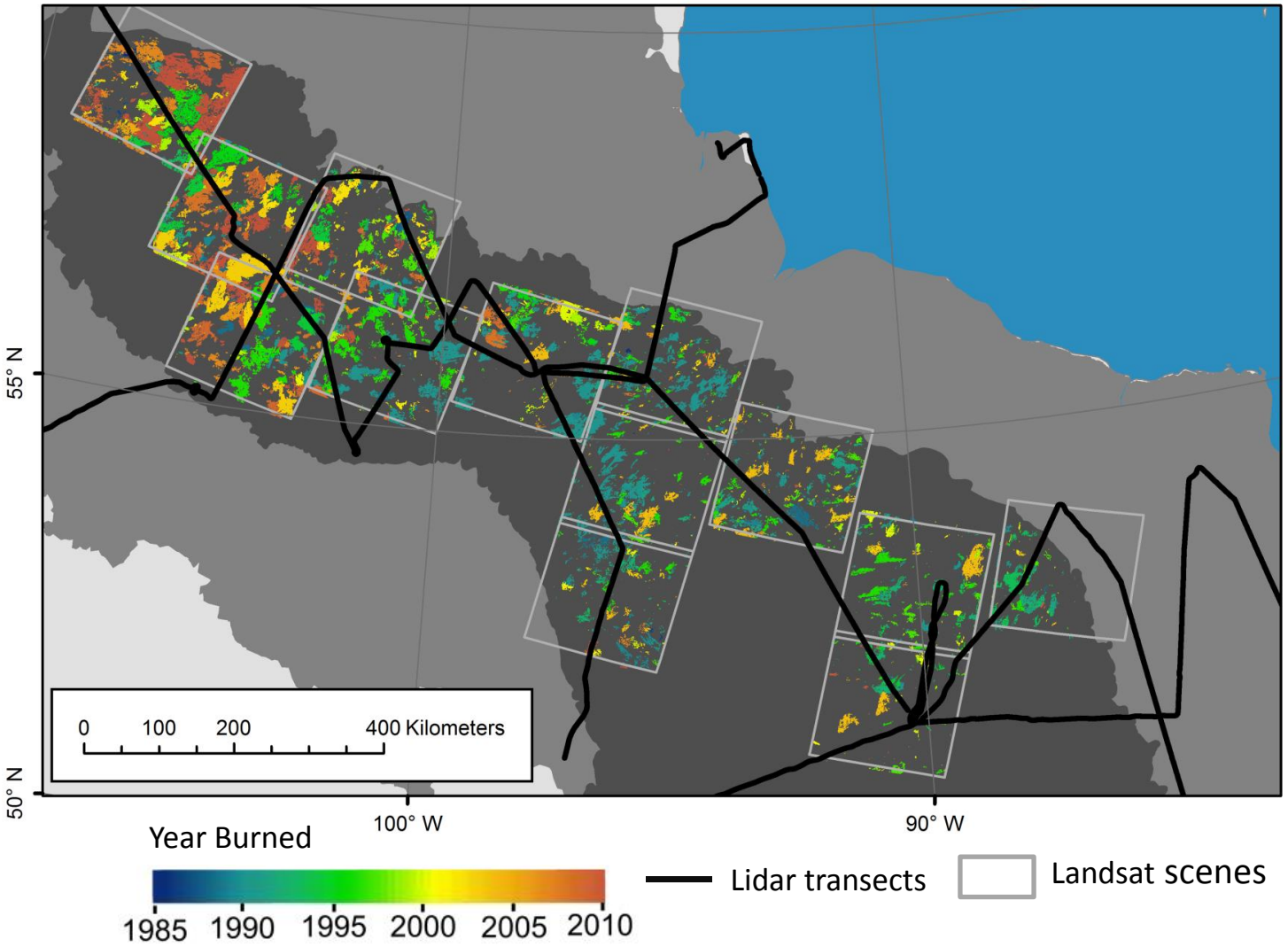
Step 2: Use pre-fire Landsat imagery to determine forest type prior to burning

- Non-forest, open forest , or dense forest

Step 3: Assess the structural response of open and dense forests to fire using the 2010 lidar transects (Build a chronosequence)

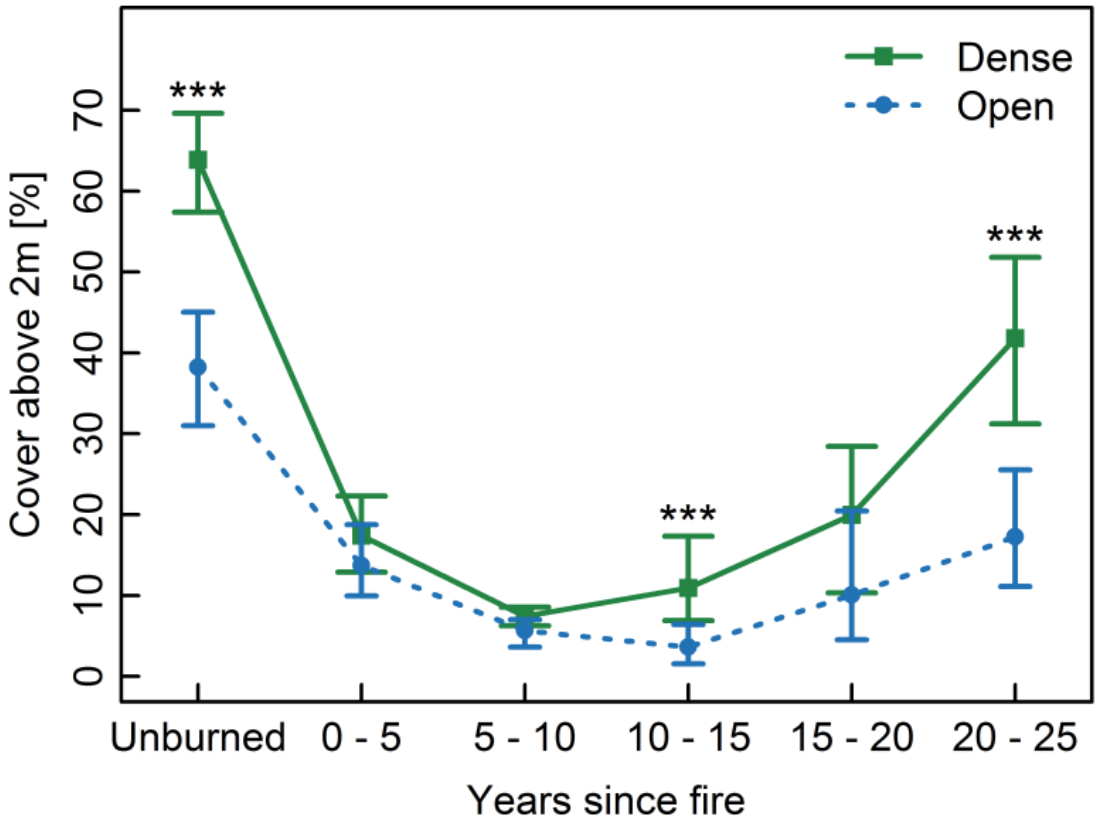


Detecting burned patches



Percent cover above 2m

Photo credit: Ignacio San-Miguel



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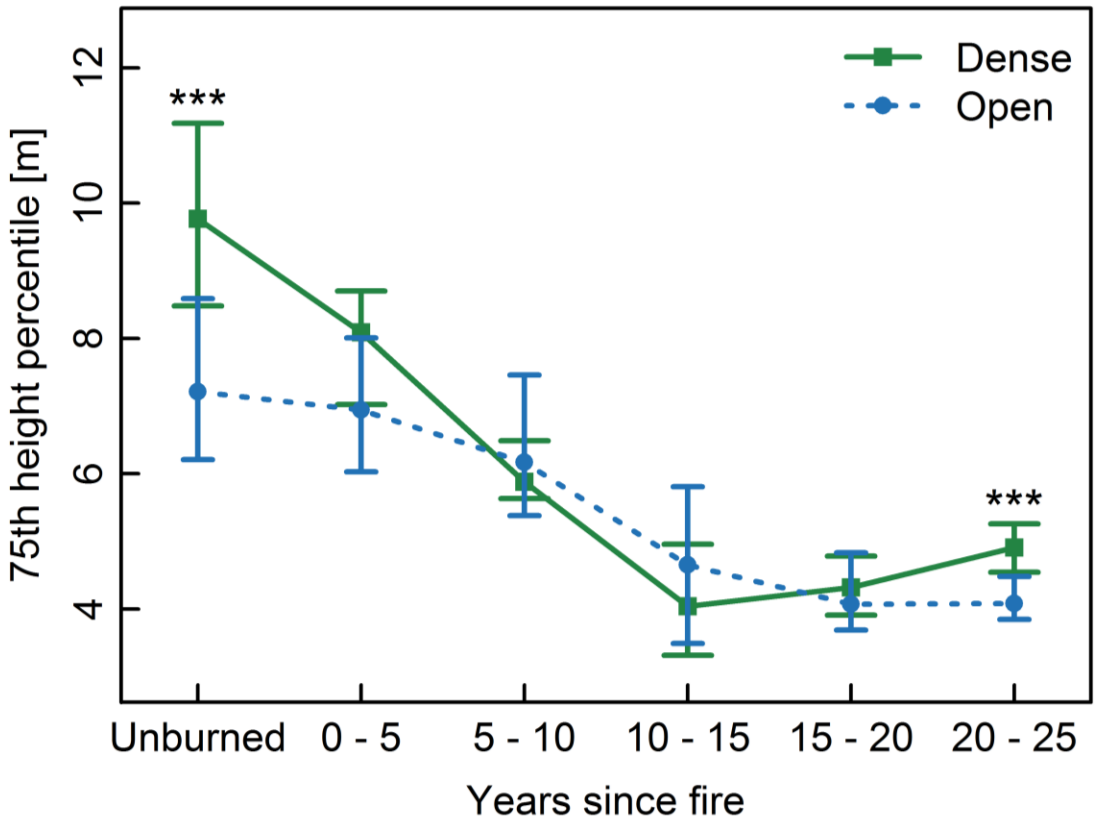
75th height percentile

- Height gain is minimal in the first 25 years since fire in slow growing boreal forests
- Including the MSS record would allow us to add 10+ years to this graph
- With 10 more years, we can significantly improve our characterization of structural development across these slow growing boreal forests



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Thank you

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This work was recently published:

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